

May 16, 2023

Legislative Water Development Commission

Water Supply Update



Joel Ferry | Executive Director
Utah Department of Natural Resources

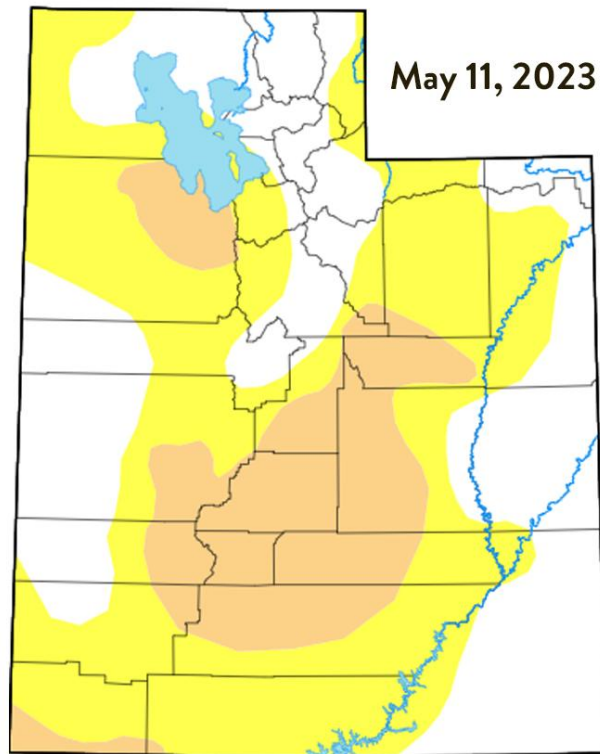
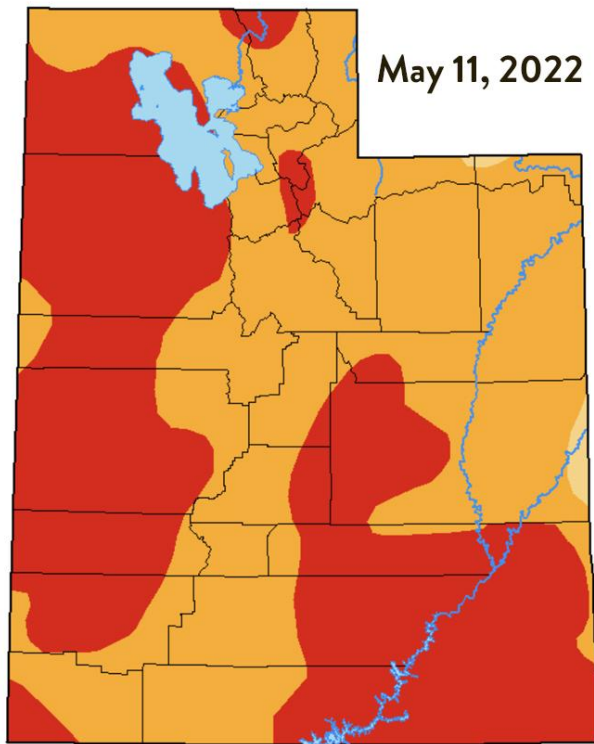
Record Snowpack

- Record snowpack across the state has increased the potential for flooding, landslides and debris flows
- Snowpack peaked at 30 inches of snow water equivalent (SWE), versus 12 inches last year
 - Current SWE is 12.6 inches (still higher than last year's total and we've been melting since the first week in April)
- We have never seen this much snow since snowpack measuring began





Drought Monitor Comparison



Current

37% None

63% Abnormally Dry

19% Moderate Dry

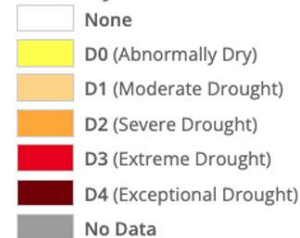
Last Year

100% Moderate

99% Severe

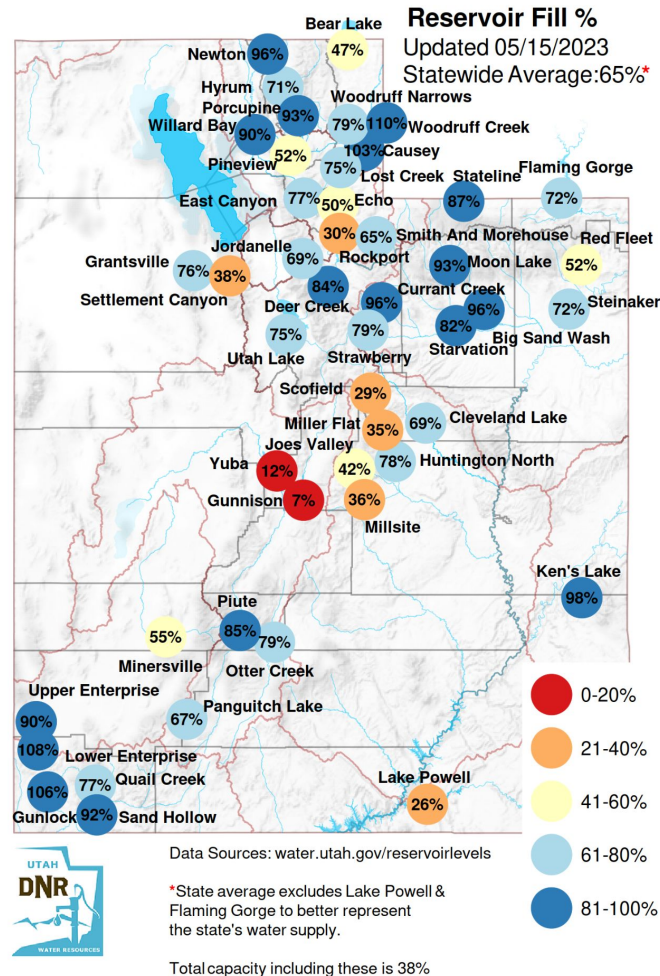
48% Extreme

Intensity



Reservoirs Across the State

- Water managers are releasing water to make room for runoff
 - Many are already very full
- With the exception of our very largest lakes and reservoirs like Strawberry, Great Salt Lake and Lake Powell, our reservoirs are expected to fill



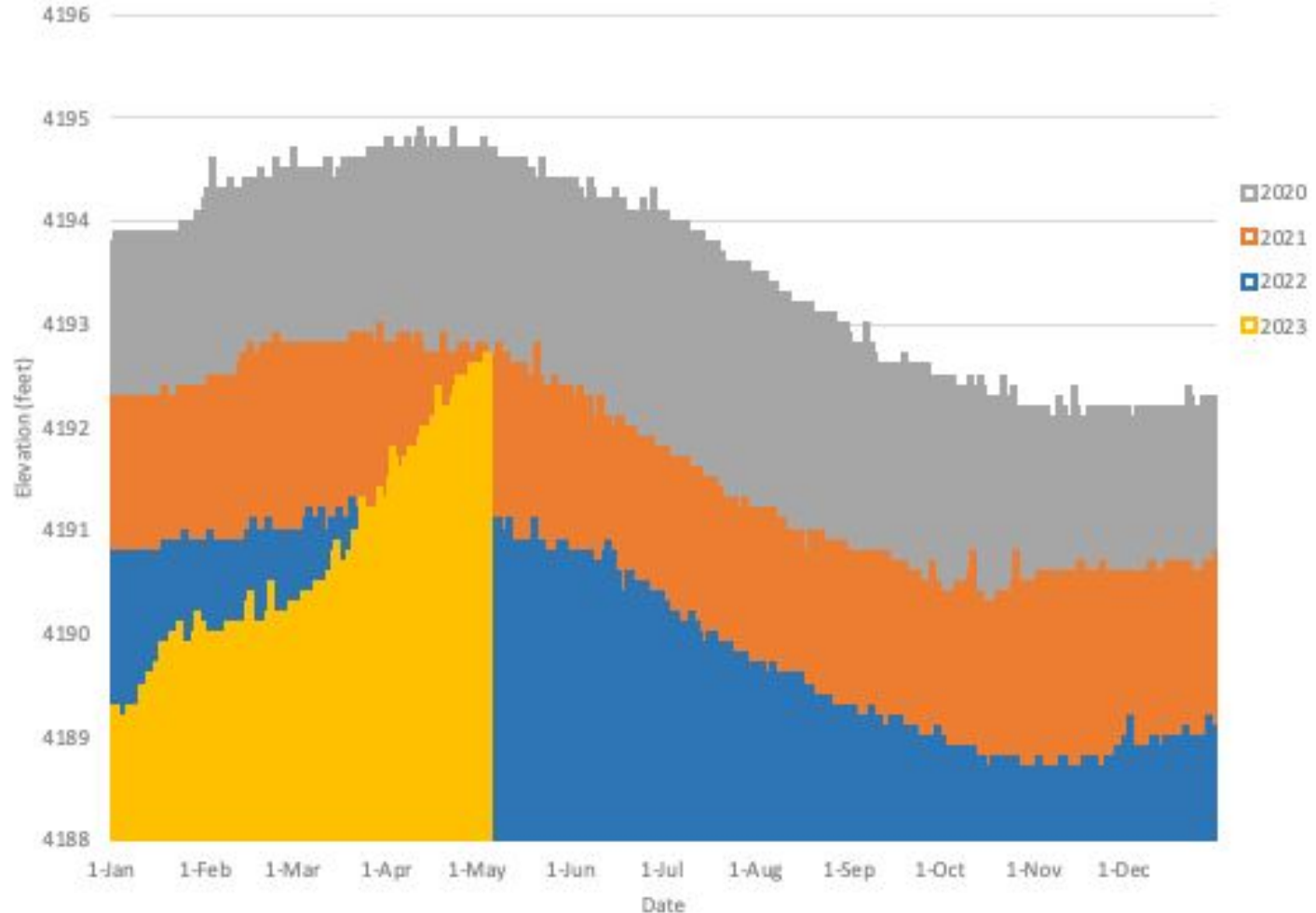
South Arm

Lake Elevation: 4192.9 ft

Salinity: 154 g/L (~14%)

The lake has come up over 4' since hitting a record low in November

Great Salt Lake Elevations



Runoff Update



- Low-elevation and a lot of mid-elevation snow has melted
- High-elevation snow is just starting to melt
- Peak flows typically occur between the **first and second week in June**

SNOW WATER EQUIVALENT IN STATE OF UTAH

Statewide just over half the snowpack has melted

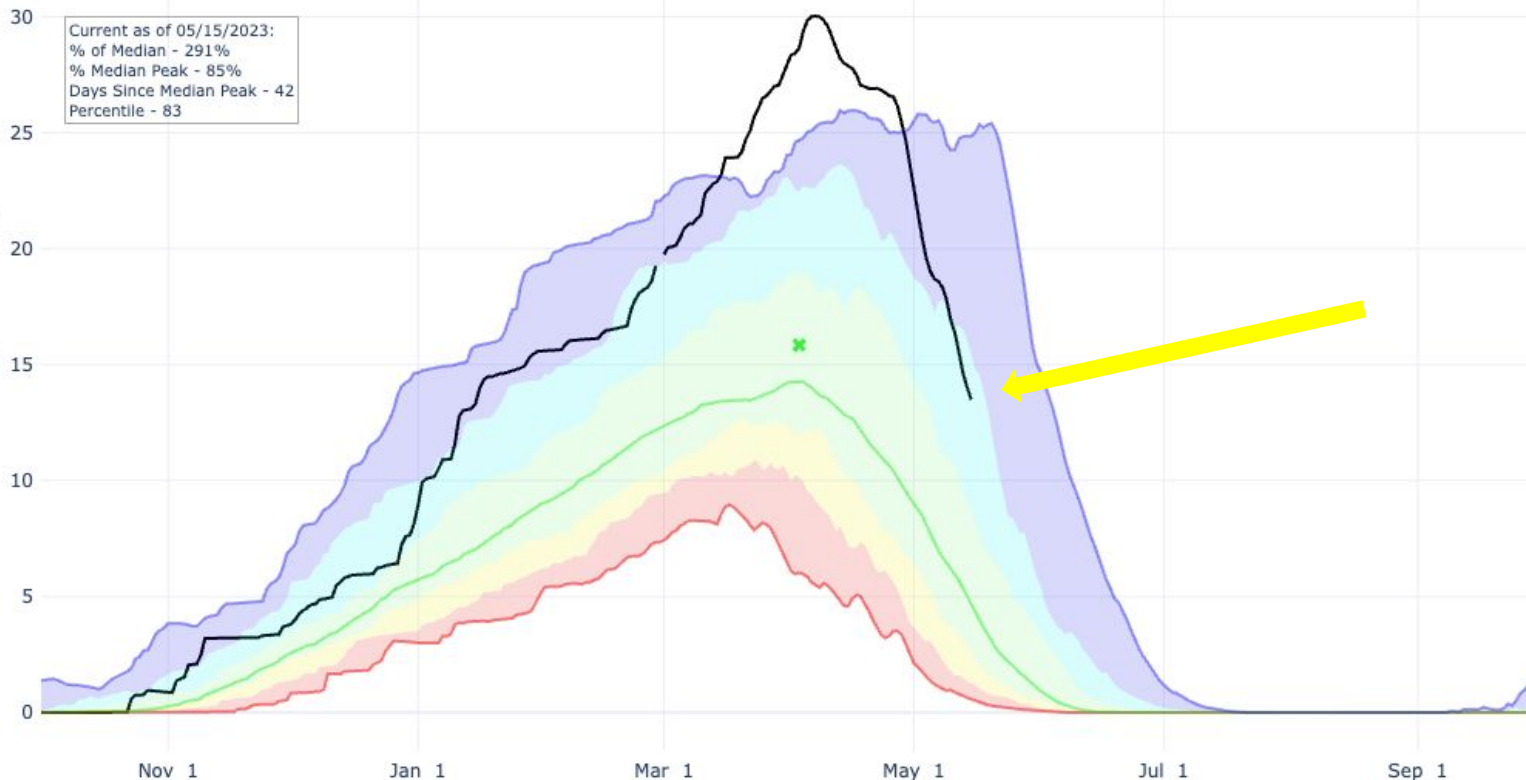
Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 05/15/2023:
% of Median - 291%
% Median Peak - 85%
Days Since Median Peak - 42
Percentile - 83

Snow Water Equivalent (in.)



- ✕ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (114 sites)
- 2022 (114 sites)
- 2021 (114 sites)
- 2020 (114 sites)
- 2019 (114 sites)
- 2018 (113 sites)
- 2017 (114 sites)
- 2016 (114 sites)
- 2015 (114 sites)
- 2014 (114 sites)
- 2013 (114 sites)
- 2012 (114 sites)
- 2011 (114 sites)
- 2010 (105 sites)
- 2009 (99 sites)
- 2008 (99 sites)
- 2007 (96 sites)
- 2006 (96 sites)
- 2005 (96 sites)
- 2004 (92 sites)

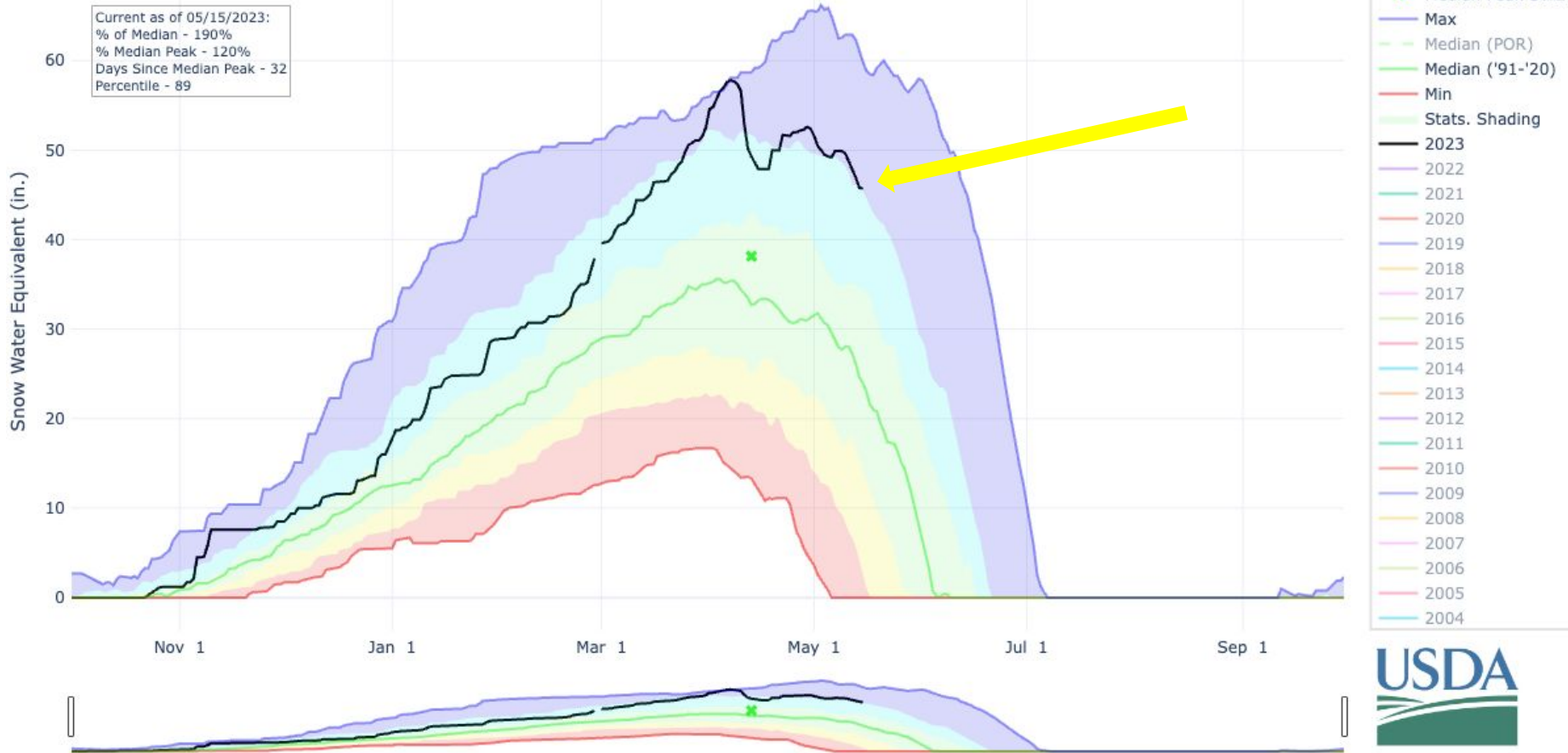


SNOW WATER EQUIVALENT AT TONY GROVE LAKE

Reset Range (Up Logan Canyon)

Still a lot of high-elevation snow to melt

[Link to data: CSV / JSON](#)

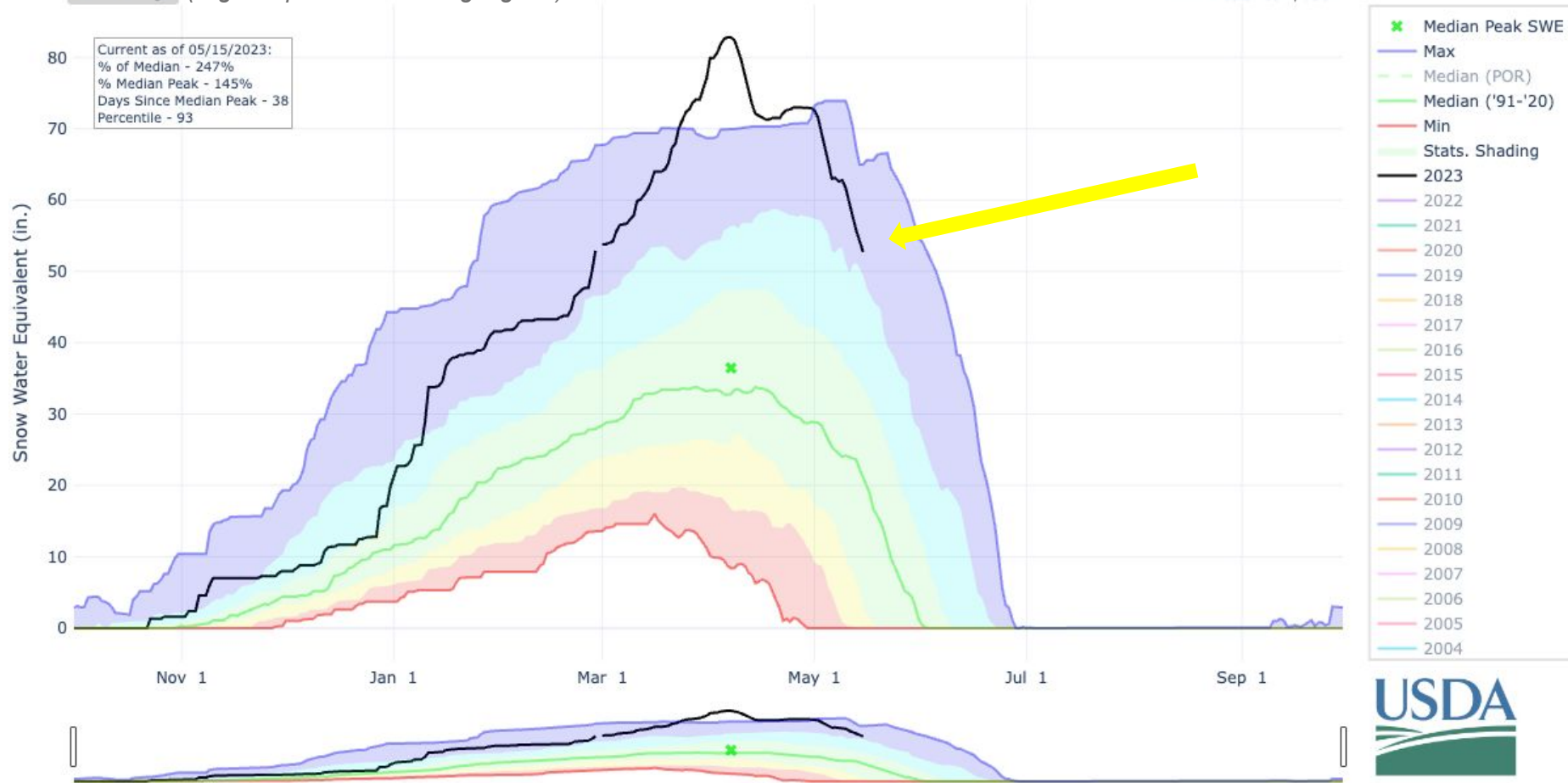


SNOW WATER EQUIVALENT AT BEN LOMOND PEAK

Still a lot of high-elevation snow to melt

Reset Range (Highest peak overlooking Ogden)

[Link to data: CSV / JSON](#)



SNOW WATER EQUIVALENT AT SNOWBIRD

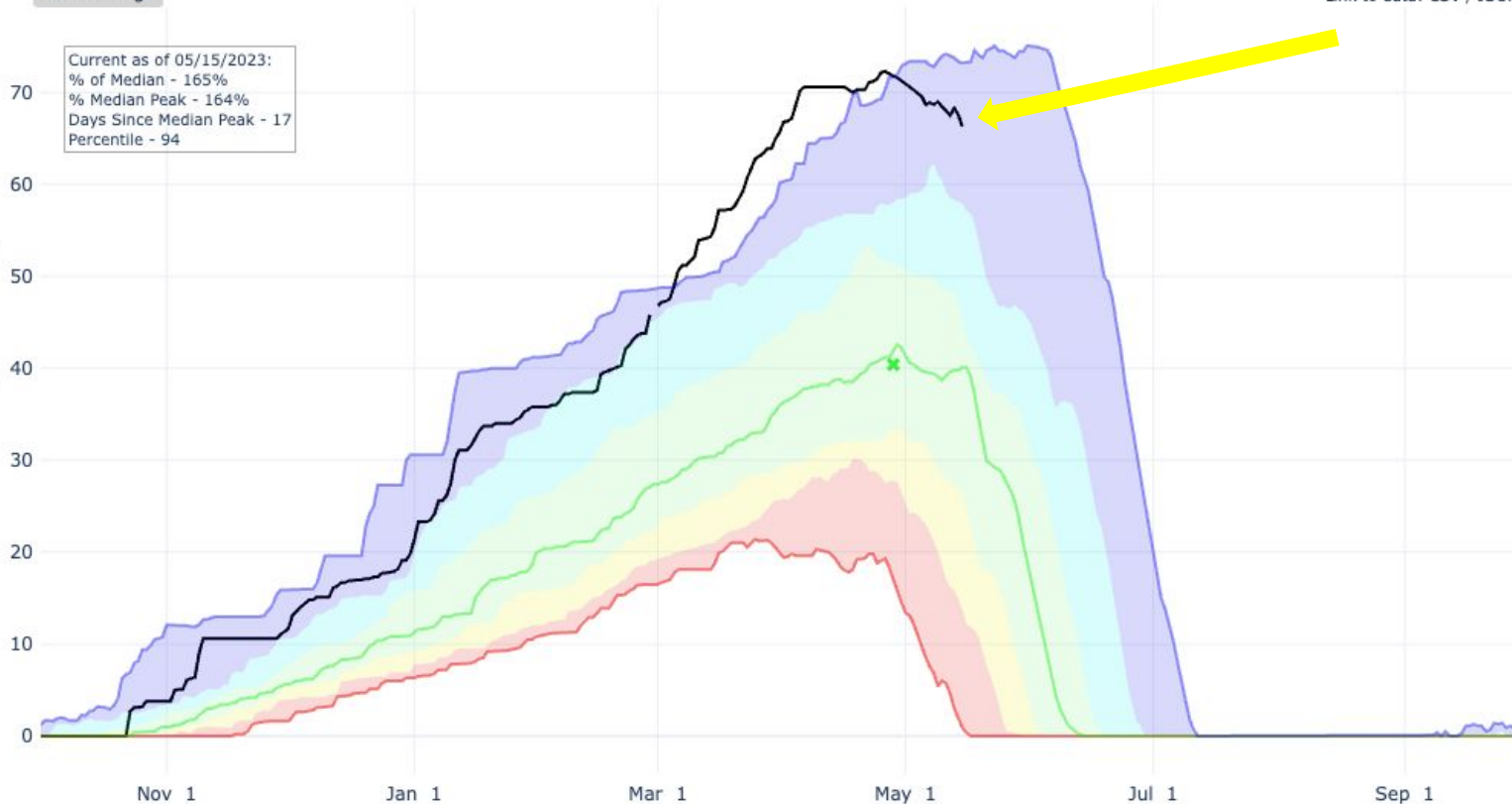
Runoff is just starting up Little Cottonwood Canyon

Reset Range

[Link to data: CSV / JSON](#)

Current as of 05/15/2023:
% of Median - 165%
% Median Peak - 164%
Days Since Median Peak - 17
Percentile - 94

Snow Water Equivalent (in.)



- ✖ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023
- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2004

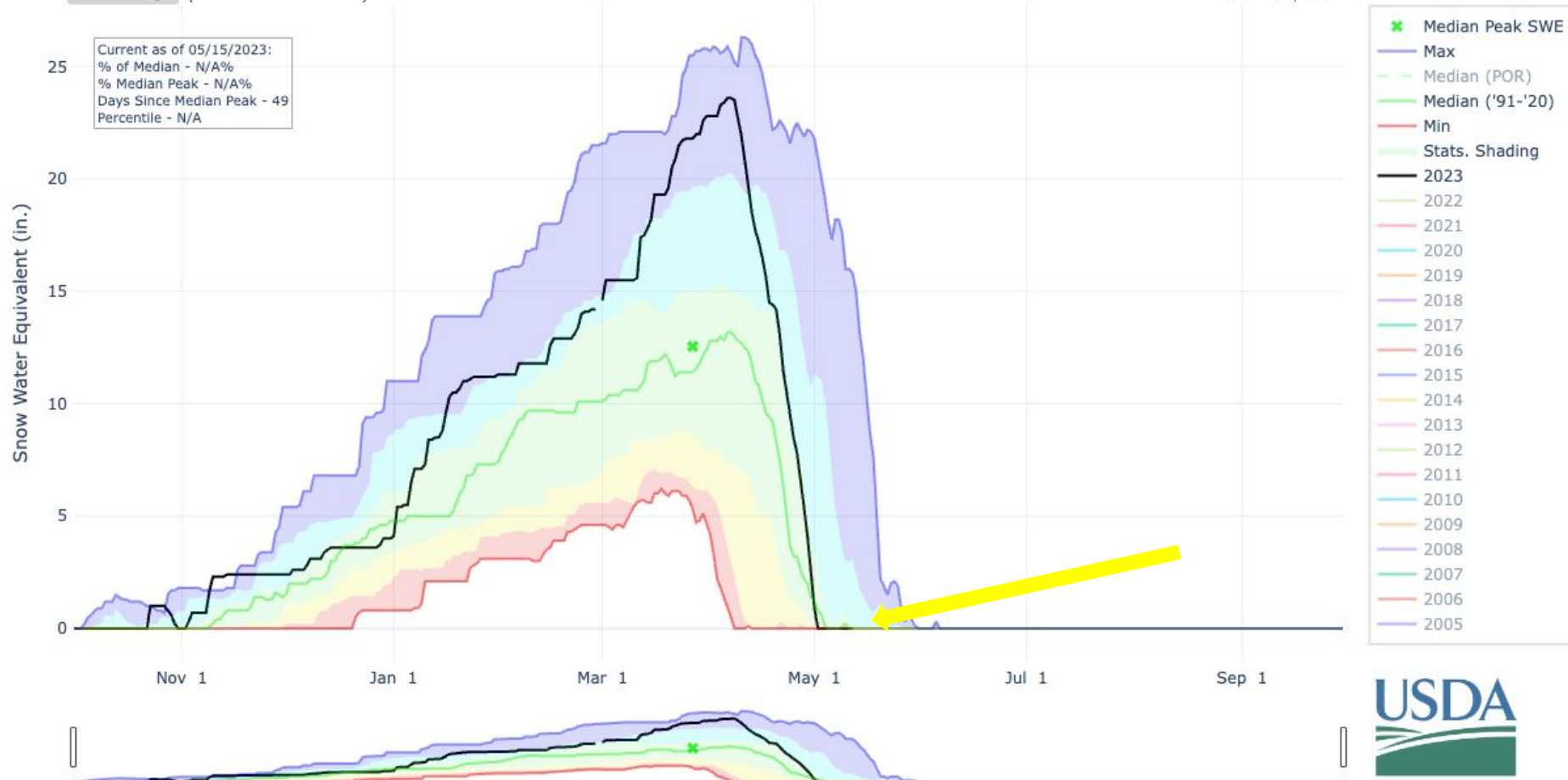


SNOW WATER EQUIVALENT AT GARDNER PEAK

Runoff is done in some areas

Reset Range (Near Hurricane)

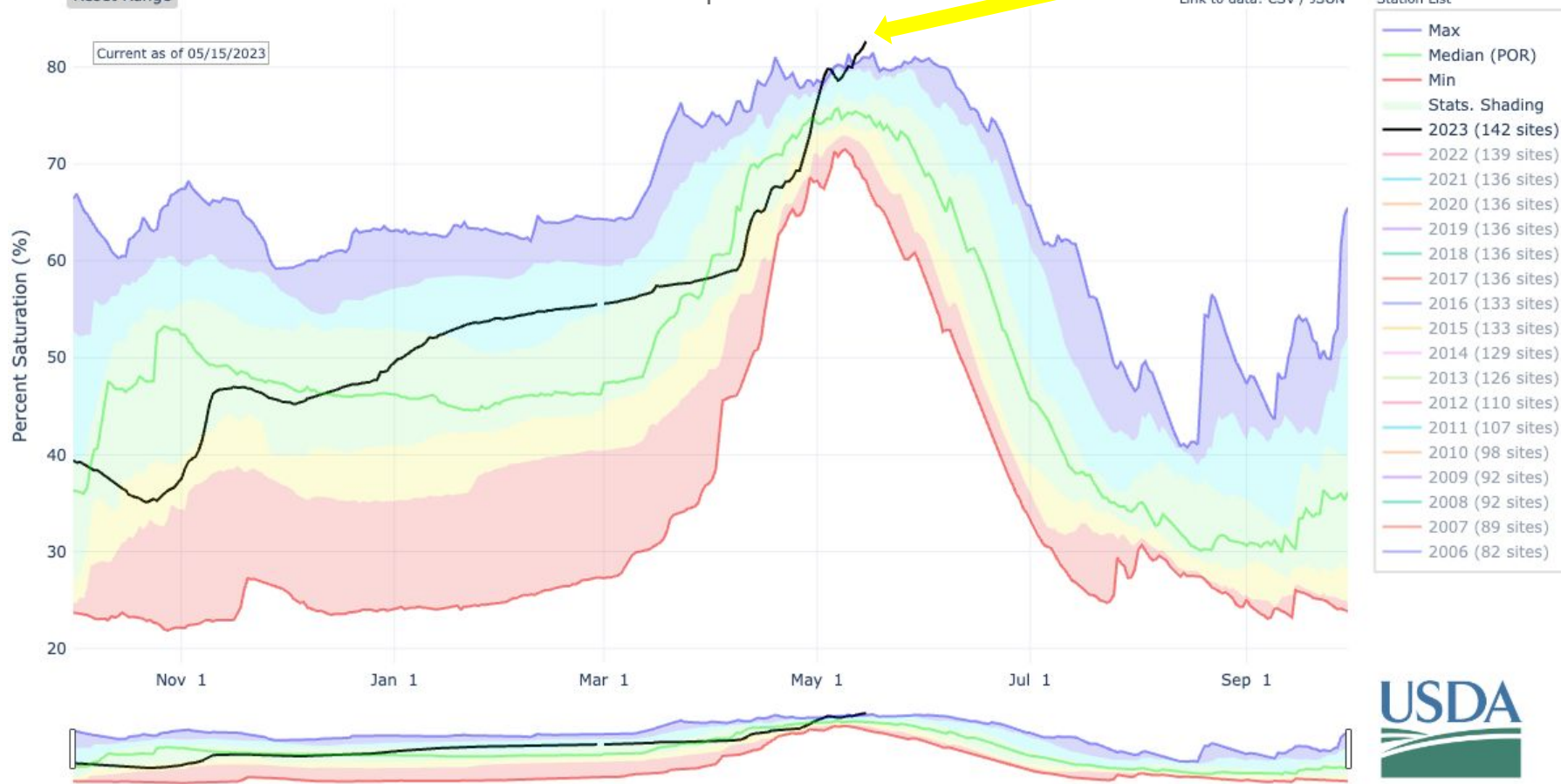
[Link to data: CSV / JSON](#)



DEPTH AVERAGED SOIL SATURATION IN STATE OF UTAH

Reset Range

Current as of 05/15/2023



Record Snowpack Triggering Mudslides & Landslides

- Mudslides are closing roads
- Homes are being evacuated because of damaging landslides
 - Two Draper homes slid into a canyon
- Homes are experiencing groundwater flooding because the water table is so high

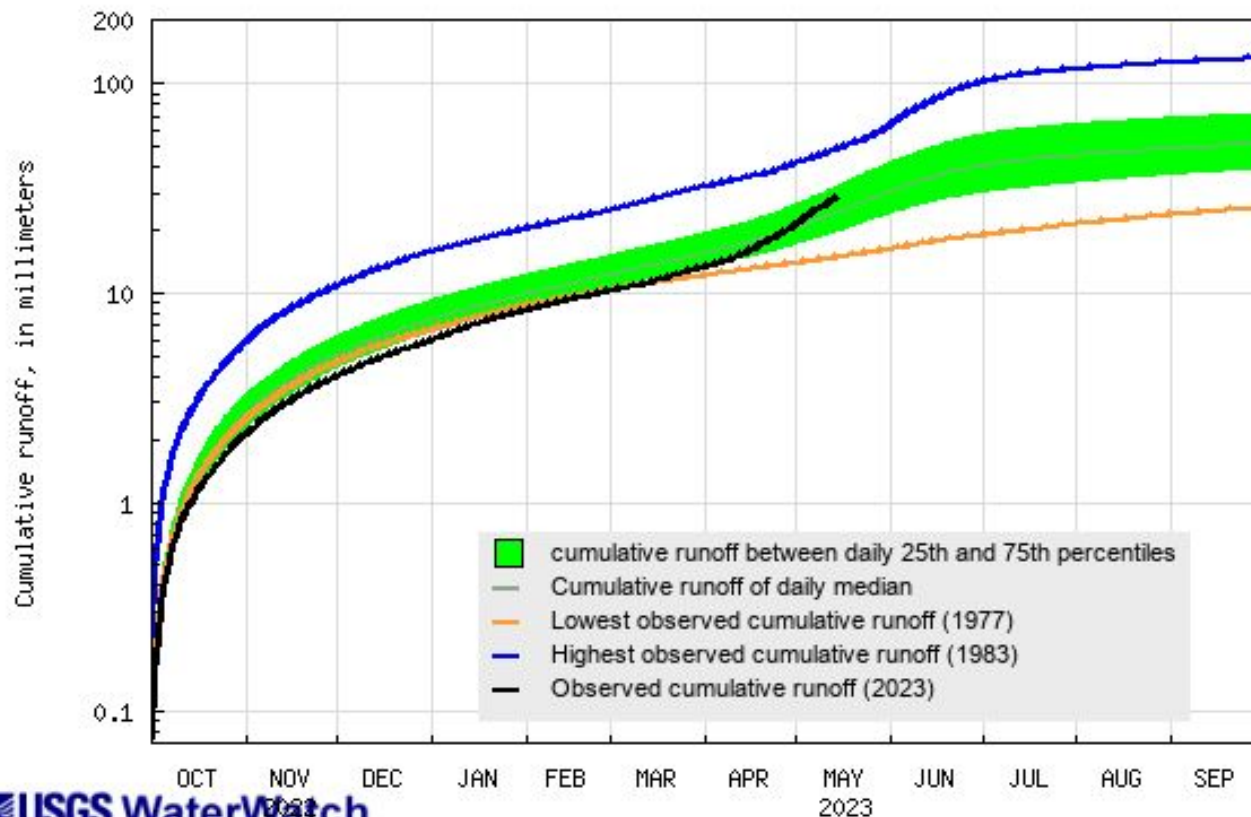


Record Snowpack Causing Flooding



- Ranchers along the Bear River have already lost cattle and are incurring extra costs to move them to higher ground
- Flooded fields are putting crops at risk because it's too wet to plant

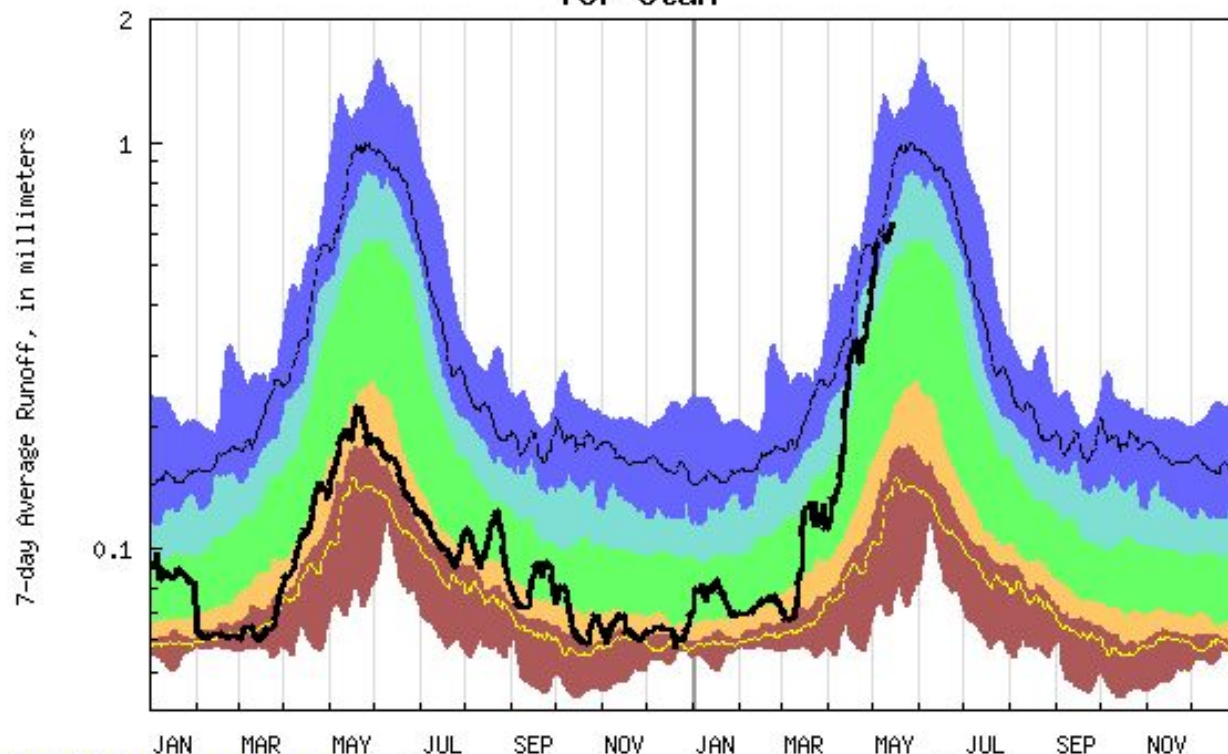
Hydrograph of cumulative 7-day average runoff for Utah



Last updated: 2023-05-15

Explanation - Percentile classes							Runoff
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest	
Much below Normal	Below normal	Normal	Above normal	Much above normal			

Duration hydrograph of 7-day average runoff for Utah

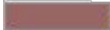







USGS WaterWatch

2022

2023

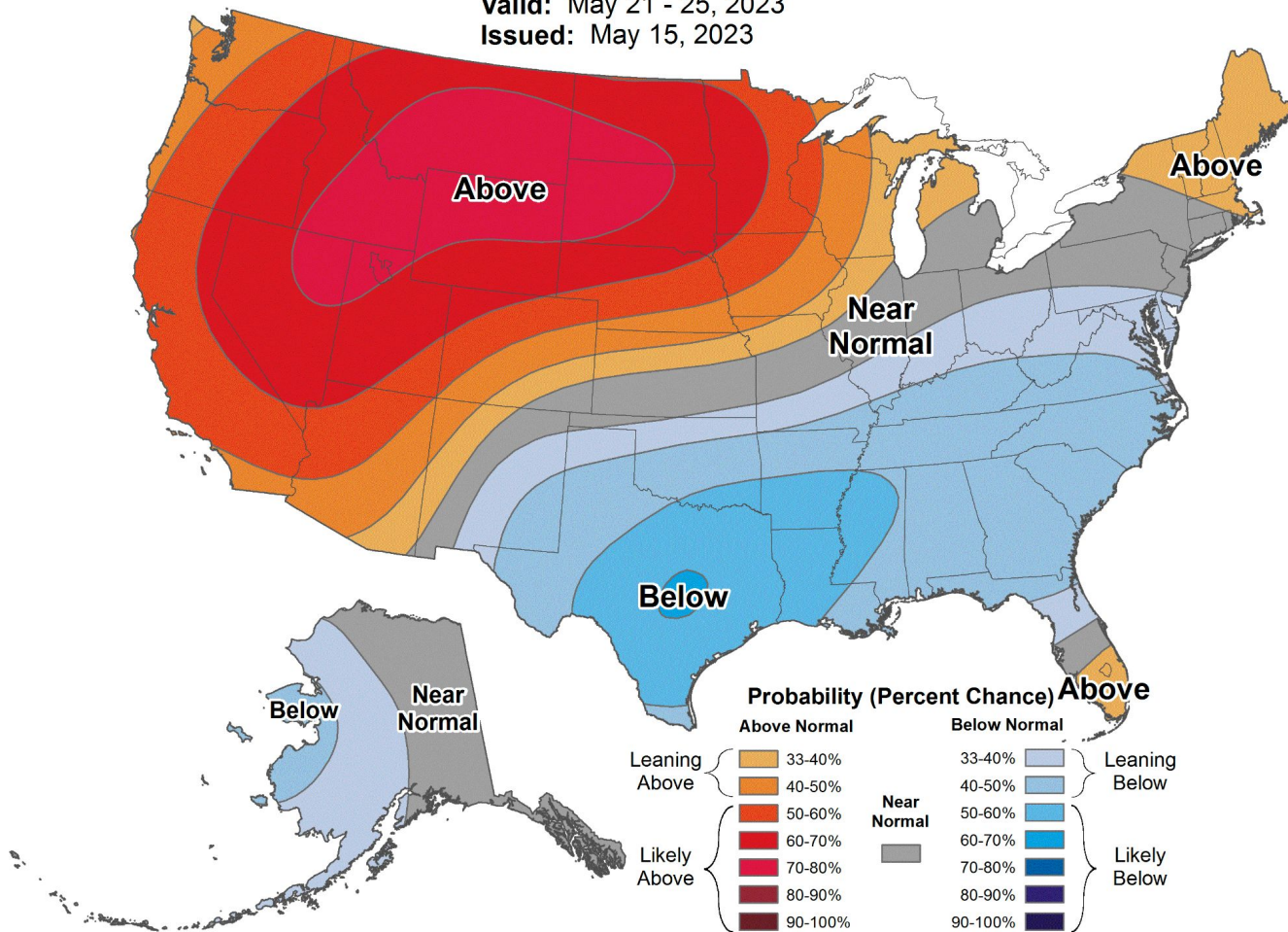
Last updated: 2023-05-15

Explanation - Percentile classes						
						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Runoff



Valid: May 21 - 25, 2023

Issued: May 15, 2023



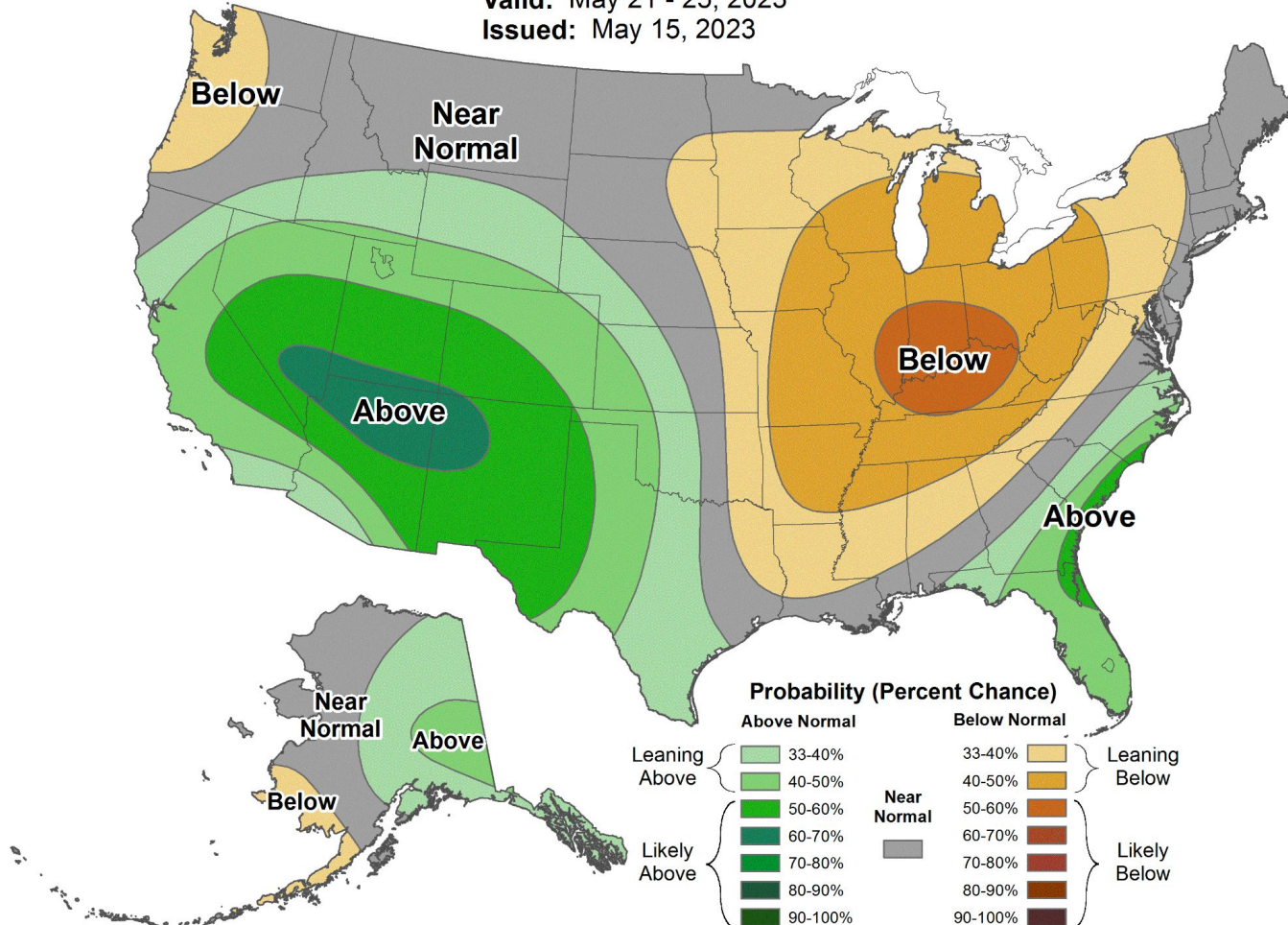


6-10 Day Precipitation Outlook



Valid: May 21 - 25, 2023

Issued: May 15, 2023



Emergency Declaration



- Streamlines state government processes
- Encourages emergency permitting measures as appropriate and mobilizes resources
- Allows the state to tap into the State Disaster Recovery Account
- Unlocks federal resources after certain thresholds are met
- Raises public awareness

Be Prepared

- Long way to go before record-deep snowpack melts and flood risks and cleanup are behind us
- Extending the emergency declaration helps ensure we have the resources in place – especially as temperatures heat up
- More information at Floods.Utah.Gov





Thank you.

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